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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,097	08/28/2003	Eun Seong Seo	2080-3-179	7715

7590

09/26/2005

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EXAMINER

BLACKMAN, ROCHELLE ANN J

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary	Application No. 10/651,097	Applicant(s) SEO ET AL.	
	Examiner Rochelle Blackman	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 12-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 12, 14, 15, 17, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Burstyn (U.S. Patent No. 6,561,649).

Regarding claim 12, Burstyn discloses a projection system (see FIGS. 1-5) comprising: a projection lens (see 302 of FIG. 3A) for enlarging and projecting an image (although element 302 is disclosed as a point source scanner projector, element 102 in FIG. 1A is an image projector, therefore an image projector can be used with same arrangement of elements in FIG. 3A) and for projecting light parallel to a screen (see 312 of FIG. 3A); an optical element formed of a convex mirror (see 304 of FIG. 3A), the optical element positioned opposite the projection lens, re-enlarging an enlarged image

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through the projection lens, and reflecting the image on a predetermined position (see function of 304 in FIG. 3A); and a rear mirror (see 308 of FIG. 3A) for displaying a reflected image through the optical element on the screen, the rear mirror being tilted at an angle of 90-130 degrees from a horizontal line (see position of 308 of FIG. 3A).

Regarding claim 14, Burstyn discloses wherein the rear mirror is tilted at an angle of 90-110 degrees from a horizontal line (see "rear mirror" 14, 25, and 30 and "screen" 16 in FIGS. 1-5).

Regarding claim 15, Burstyn discloses wherein a tilt-angle difference between the rear mirror and the screen ranges 0-40 degrees (see 308 relative to 312 in FIG. 3A).

Regarding claim 17, Burstyn discloses wherein the rear mirror is a planar mirror (see 308 of FIG. 3A).

Regarding claim 19, Burstyn discloses wherein the rear mirror is a non-spherical mirror (see 308 in FIG. 3A).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Monson et al. (U.S. Patent No. 6,388,810) in view of Burstyn (U.S. Patent No. 6,561,649).

Regarding claim 12, Monson discloses a projection system (see FIGS. 1-5) comprising: a projection lens (see 11 of Figs. 1-5 – the “projection lens” 11 is capable of projecting light parallel to “screen” 16 or 21 in all of the figures. Light ray 13a is parallel to screen 21 in FIG. 4 and parallel to screen 16 in Fig. 5) for enlarging and projecting an image and for projecting light parallel to a screen; an optical element (see 12 of FIGS. 1-5), the optical element positioned opposite the projection lens, and reflecting the image on a predetermined position; and a rear mirror (see 14, 25, 30 of FIGS. 1-5) for displaying an reflected image through the optical element on a screen (see 16, 21 of FIGS. 1-5), the rear mirror being tilted at an angle of 90-130 degrees from a horizontal line (see position of 14, 25, and 30 in FIGS. 1-5).

Regarding claim 13, Monson discloses wherein the optical element is disposed at an upper portion of the projection lens (see 12 in FIGS. 1-4)

Regarding claim 14, Monson discloses wherein the rear mirror is tilted at an angle of 90-110 degrees from a horizontal line (see “rear mirror” 14, 25, and 30 and “screen” 16 in FIGS. 1-5).

Regarding claim 15, Monson discloses wherein a tilt-angle difference between the rear mirror and the screen ranges 0-40 degrees (see “rear mirror” 14, 25, and 30 and “screen” 16 in FIGS. 1-5).

Regarding claim 16, Monson discloses wherein the optical element is disposed at an upper portion between the rear mirror and the screen"(see 12 in FIGS. 1-4).

Regarding claim 17, Monson discloses wherein the rear mirror is a planar mirror (see "rear mirror" 14 in FIGS. 1, 2, and 5).

Regarding claim 18, Monson discloses wherein the rear mirror is a spherical mirror (see "rear mirror" 25, 30 of FIGS. 3 and 4).

Regarding claim 19, Monson discloses wherein the rear mirror is a non-spherical mirror (see "rear mirror" 14 in FIGS. 1, 2, and 5).

Monson does not appear to disclose the optical element being formed of a "convex mirror".

Burstyn teaches providing an optical element formed of a convex mirror (see 304 in FIG. 3A).

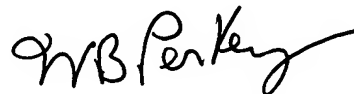
It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a convex mirror in place of planar or non-spherical mirror 12 in the Monson reference, as taught by Burstyn for the purpose of reducing cabinet depth of the projection system (see col. 1, lines 65-66).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rochelle Blackman whose telephone number is (571) 272-2113. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



RB

William Perkey
Primary Examiner